

REMARKS

Claims 1 - 4, 9 - 11, 20 - 21, and 31 - 42 are pending. Claims 1, 9, and 20 have been amended. Claims 5 - 8, 12 - 16, 18 - 19, 22 - 26, and 28 - 29 have been cancelled. Claims 30 - 41 have added. No new matter has been added. Reconsideration and allowance of the present application based on the above amendments and following remarks are respectfully requested.

In the March 9, 2005 Office Action, the Examiner rejected claim 29 under 35 U.S.C. § 112, second paragraph. The applicants have cancelled claim 29.

The Examiner rejected claims 1 - 16, 18 - 26, and 28 - 20 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,505,244 to Natarajan et al. ("the Natarajan reference"). This rejection is respectfully traversed is so far as it is applicable to the presently pending claims.

Independent claim 1, as amended, recites:

A system for host-based QoS provisioning, comprising:
a host system connecting to a network, said host system initiating a data flow associated with an application running in the host system, said data flow being sent to said network; and
a centralized QoS provisioning mechanism for enforcing flow control on said data flow of said application originated from said host system by establishing a QoS provisioning policy for said application, wherein said centralized QoS provisioning mechanism is coupled to said host system, and said flow control is enforced on said data flow of said application using a filter and a flow specification constructed for said application based on the QoS provisioning policy, **the application being one of a Voice over IP application or a video conferencing application.**

The Natarajan reference does not disclose, teach, or suggest the system of independent claim 1, as amended. The Natarajan reference discloses a feedback-based adaptive network, where at least a portion of network elements

reporting operating information relating to network conditions are fed to a centralized data store. A policy engine computes updated control information based on analyzing the reported operating information. This updated control information is fed back to selected network elements, which affects operation of the selected elements. (*Abstract, column 2, lines 23-40*). A network element can be a router, a switch, a host, modems, terminals, dial access servers, gateways, ports, channels, interfaces, circuits, processes, drivers, protocols, services, applications, etc. (*Col. 8, lines 8 - 20*). The Natarjan reference also discloses that the policy engine allows for application specific plug-in policies to be added or deleted. The Natarjan reference discloses application specific plug-in policies as frame relay policies, ATM policies, dial up policies, traffic shaping policies, QoS policies, security policies, admin policies, or SLA policies. (*Col. 14, lines 33- 50*)). In other words, the Natarjan disclosed applications concern traffic control or access to the system, as opposed to end-user applications such as video conferencing or VoiceoverIP.

The Natarajan reference does not disclose a system for host-based QoS provisioning including a system for host-based QoS provisioning, including a host system and a centralized QoS provisioning mechanism for enforcing flow control on said data flow of said application originated from said host system by establishing a QoS provisioning policy for said application, wherein said centralized QoS provisioning mechanism is coupled to said host system, and said flow control is enforced on said data flow of said application using a filter and a flow specification constructed for said application based on the QoS

provisioning policy, **the application being one of a Voice over IP application or a video conferencing application.** The application specific plug-in policies disclosed in the Natarajan reference are not for applications such as Voice over IP or video conferencing. Instead, the Natarajan reference applications which are controlled by the policy engine are traffic management applications, transport layer protocol applications, or system security applications, which is not the same for enforcing flow control on said data flow of said application originated from said host system by establishing a QoS provisioning policy for said application, **the application being one of a Voice over IP application or a video conferencing application.** The Natarajan reference discloses that that a videoconference can be initiated by two users, but discloses only that a frame relay CIR policy can be initiated and then later evaluated. (*Col. 29, line 59 - col. 30, line 60*). There is no disclosure that a filter and flow specification is enforced for a Voice over IP or video conferencing application. Accordingly, applicants respectfully submit that claim 1 distinguishes over the Natarajan reference.

Claims 9 and 20, both as amended, recite limitations similar to claim 1, as amended. Accordingly, claims 9 and 20 distinguish over the Natarajan reference for reasons similar to those discussed above in regard to claim 1, as amended.

Claims 2 - 4, 10 - 11, and 21 depend, indirectly or directly, on claims 1, 9, and 20, all as amended. Accordingly, claims 2 - 4, 10 - 11, and 21 distinguish over the Natarajan reference for the same reasons as those discussed above in regard to claim 1, as amended.

Claim 30 distinguishes over the Natarajan reference. Claim 30 recites:

A Quality of Service (QoS) provisioning policy updating unit, comprising:

a manual user-driven updating unit to receive update measures from an administrator where the update measures specify how Quality of Service policies are to be updated and to transmit an manually updated QoS policy;

an automatic feedback-driven adaptation unit to receive both per flow usage statistics for an application and local network usage statistics, to determine adaptation measures based on both the per flow usage statistics and the local network usage statistics, to revise an existing QoS policy based on the adaptation measures to create an automatically updated QoS policy, and to transmit the automatically updated QoS policy; and

a flow control instruction unit to receive the manually updated QoS policy and the automatically updated QoS policy, to generate an updated flow specification for the application based on both the manually updated QoS policy and the automatically updated QoS policy, and to transmit the updated flow specification to a network traffic agent.

The Natarajan reference does not disclose the provisional policy updating unit of claim 30. The Examiner states that column 32, line 12 - col. 33, line 56 discloses a manual user-driven updating unit for performing manual update of said QoS provisioning policy to generate an updated QoS policy for said application. (*Office Action, page 6*). Specifically, the Natarajan reference discloses that the dynamic modification of the policy within the policy engine may be implemented manually by a system administrator via a console, or alternatively, automatically by a system utilizing artificial intelligence or fuzzy logic. (*Col. 32, line 19 -24*).

This is not the same as a QoS provisioning policy unit including **a flow control instruction unit to receive the manually updated QoS policy and the**

automatically updated QoS policy and to generate an updated flow specification for the application based on both the manually updated QoS policy and the automatically updated QoS policy. It is not the same because the Natarajan reference discloses manually modifying a policy, or alternatively, automatically modifying a policy, and there is no disclosure that a new flow specification is generated **based on both the manually updated QoS policy and the automatically updated QoS policy**, as is recited in claim 30.

Accordingly, the applicants respectfully submit that claim 30 distinguishes over the Natarajan reference.

Claims 32 and 34 recite similar limitations to claim 30. Accordingly, claims 32 and 35 distinguish over the Natarajan reference for reasons similar to those disclosed above in regard to claim 30.

Claims 31, 33, and 35 depend, indirectly or directly, on claims 30, 32, and 34, respectively. Accordingly, claims 31, 33, and 35 distinguish over the Natarajan reference for the same reasons as those discussed above in regard to claim 30.

Claim 36 distinguishes over the Natarajan reference. Claim 36 recites:

A Quality of Service (QoS) provisioning policy updating unit, comprising:

a manual user-driven updating unit to receive update measures from an administrator where the update measures specify how Quality of Service policies are to be updated and to transmit an manually updated QoS policy which is generated based on the update measures;

an automatic feedback-driven adaptation unit to receive both first per flow usage statistics for an application and first local network usage statistics during a first cycle time, to determine first adaptation measures for the application based on both the first per flow usage statistics and the first local

network usage statistics for the first cycle time, to receive both second per flow usage statistics for the application and second local network usage statistics during a second cycle time, to determine second adaptation measures based on both the second per flow usage statistics and the second local network usage statistics, to modify an existing automatic QoS policy based on the first adaptation measures and the second adaptation measures to create an automatically updated QoS policy, and to transmit the automatically updated QoS policy; and

a flow control instruction unit to receive the manually updated QoS policy and the automatically updated QoS policy, to generate an updated flow specification for the application, and to transmit the updated flow specification to a network traffic agent, wherein the manual user-driven updating unit also transmit the manually updated QoS policy to a policy server and the automatic feedback driven adaptation unit also transmits the automatically updated QoS policy to the policy server.

Claim 36 recites similar limitations to claim 30. Accordingly, claim 36 distinguishes over the Natarajan reference for reasons similar to those discussed above in regard to claim 30. Further, the Natarajan reference does not disclose a QoS provisioning policy unit including **an automatic feedback-driven adaptation unit to receive both first per flow usage statistics for an application and first local network usage statistics during a first cycle time, to determine first adaptation measures for the application based on both the first per flow usage statistics and the first local network usage statistics for the first cycle time, to receive both second per flow usage statistics for the application and second local network usage statistics during a second cycle time, to determine second adaptation measures based on both the second per flow usage statistics and the second local network usage statistics, to modify an existing automatic QoS policy based**

on the first adaptation measures and the second adaptation measures to create an automatically updated QoS policy, and to transmit the automatically updated QoS policy. The Examiner states that nine different sections of the Natarajan reference disclose performing said automatic QoS provisioning adaptation in a plurality of cycles. (*Office Action, page 13*). The applicants do not see that the Natarajan reference discloses performing automatic QoS provisioning in a plurality of cycles and requests that the Examiner cite specific columns and paragraphs along with reference numerals identifying how the Natarajan reference compares to claim 36.

The Natarajan reference does not disclose the generation of first and second adaptation measures, **where the first and second adaptation measures are determined based on the per flow usage statistics for the application and network performance statistics during a first cycle time and a second cycle time, respectively.** In addition, the Natarajan reference does not disclose **the modification of an existing QoS provisioning policy based on the first adaptation measures and the second adaptation measures to create an updated QoS provisioning policy.** Accordingly, applicants respectfully submit that claim 36 distinguishes over the Natarajan reference.

Independent claims 38 and 40 recite limitations similar to claims 36. Accordingly, applicants respectfully submit that claims 38 and 40 distinguish over the Natarajan reference for reasons similar to those discussed above with regard to claim 36.

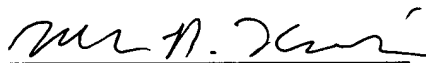
Claims 37, 39, and 41 depend, indirectly or directly on claims 36, 38, and 40. Accordingly, applicants respectfully submit that claims 37, 39, and 41 distinguish over the Natarajan reference for the same reasons as those discussed above in regard to claim 36.

Applicants believe that the foregoing amendments place the application in condition for allowance, and a favorable action is respectfully requested. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles telephone number (213) 488-7100 to discuss the steps necessary for placing the application in condition for allowance should the Examiner believe that such a telephone conference would advance prosecution of the application.

Respectfully submitted,

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Date: September 9, 2005

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